Chapter 4

Service and Support

This chapter provides the doctrine for the combat service support (CSS) for JTAGS detachments and sections. CSS is the essential capabilities, functions, activities, and tasks necessary to sustain all elements of operating forces in theater at all levels of war. CSS elements are organized to support military forces by manning, arming, fueling, fixing, moving, and sustaining soldiers and their systems.

GENERAL PLANNING

4-1. Logistic support for JTAGS nonspecific (Army common) items is provided to fielded units through the Army maintenance system and the Army supply system via the unit level logistics system – ground (ULLS-G). The supply and maintenance policies set forth in AR 710-2 and AR 750-1, respectively, will be followed.

4-2. Contractor logistic support (CLS) will be used for JTAGS peculiar equipment. Employment of civilian contractors on the battlefield involves many considerations and risks. As this field manual goes to press, a 715-series Army regulation and a 100-series Army field manual are in the development process. When published, these two documents will provide doctrine and guidance for commanders and staff planners. Responsible individuals should review and incorporate their requirements when they are published. The logistic support concept has two levels: organizational and depot (CLS). The logistic assistance representatives (LARs) provide technical assistance to JTAGS units. The LARs are part of the maintenance concept and interface between the supported units, Aviation and Missile Command (AMCOM), and the contractor. Maintenance and supply concepts are summarized in Figure 4-1.

COMBAT SERVICE SUPPORT

DETACHMENT CSS RESPONSIBILITIES

4-3. The responsibilities listed in the succeeding paragraphs are not extensive, nor are they all-inclusive. The lists are intended only as broad guidelines and starting points from which the leaders of the detachment and sections can begin to assign the work of running the unit.

DETACHMENT COMMANDER

4-4. Detachment commander responsibilities are to:

- Exercise overall supervision and control of detachment CSS functions and systems.

- Continually review CSS requirements.

- Assign CSS responsibilities to detachment and section personnel.

- Participate in site surveys.

- Establish standard operating procedures (SOPs) for CSS functions (e.g., maintenance, supply, personnel management).
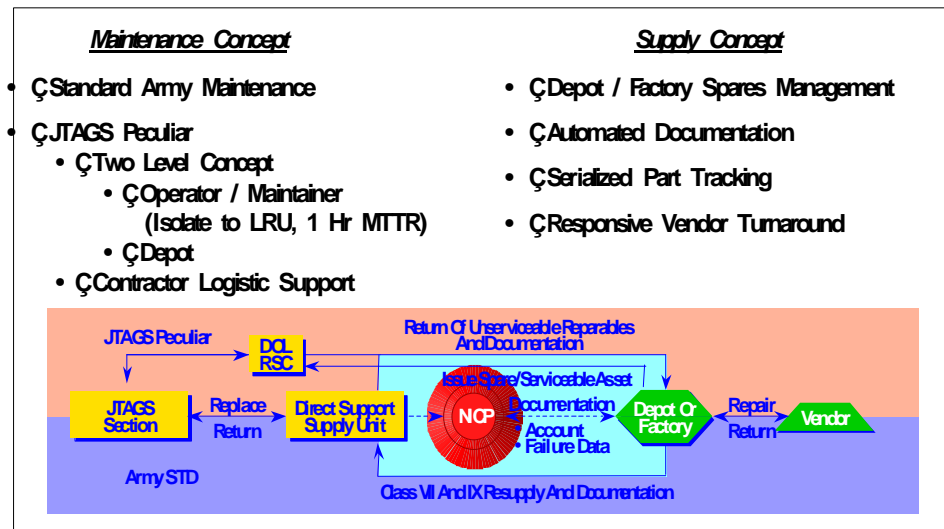

Figure 4-1. Logistic Concept

DETACHMENT SERGEANT

4-5. The detachment sergeant coordinates soldier sustainment and supply support for assigned Army and Navy personnel.

SECTION WARRANT OFFICER

4-6. Section warrant officer responsibilities are to:

- Exercise supervision and control of section CSS functions and systems.

- Perform duties as section and detachment maintenance officer and maintenance technician.

- Participate in JTAGS site surveys.

- Assign CSS responsibilities to section personnel as appropriate.

SECTION OPERATIONS SERGEANT

4-7. Section operations sergeant responsibilities are to:

- Perform the same CSS functions as the detachment sergeant when the section is deployed separately from the detachment headquarters.

- Supervise the efficient and effective accomplishment of section maintenance and support tasks.

SECTION EQUIPMENT RECORDS AND PARTS SERGEANT

4-8. Section equipment records and parts sergeant responsibilities are to:

- Know both prescribed load list (PLL) and the Army maintenance management system (TAMMS) procedures.

- Maintain current copy of appropriate supply, maintenance, and other publications.

- Maintain JTAGS peculiar PLL in accordance with appropriate regulations, procedures, and JTAGS system technical letter.

- Submit requisitions to CLS depot for JTAGS peculiar items in accordance with appropriate regulations, procedures, and JTAGS system technical letter.

- Submit requisitions through the supported unit for standard items.

- Follow up requisitions as required.

SUPPLY

4-9. Supply includes the acquisition, storage, care of materiel in storage, distribution, and salvage of supplies. It also includes the determination of kind and quantity of supplies. Supplies consist of all items necessary for equipping, maintaining, and operating a military command. Supply support that includes installation retail supply and storage operations is used in support of a JTAGS detachment or section. Supply support consists of a JTAGS peculiar PLL, which is maintained by the JTAGS section, and common or standard items, which are requested through the supported unit. JTAGS peculiar components will use CLS for the life of the system. Standard items of a PLL and the initial associated authorized stockage list (ASL) for Government furnished equipment (GFE) are provided to the supporting unit and serviced in theater through the area support group (ASG).

4-10. Supplies needed by JTAGS units in the various classes of supply are listed below. This support is provided by the unit to which the JTAGS is assigned or attached.

- Class I (subsistence) support is required for support 15 personnel per JTAGS section and 3 personnel per JTAGS detachment headquarters (total of 18 personnel for a DET HQ and one section or 33 personnel for a complete JTAGS detachment).

- Class II (clothing, individual equipment tentage, hand tools, sets, kits and outfits, administrative and housekeeping supplies): The JTAGS deploys with all assigned Class II; however, Class II support may be required from the supported headquarters/gaining command for extended deployments.

- Class III (petroleum, oil, and lubricants (POL)): The JTAGS requires fuel support for operating the generator if commercial power is not available. Fuel consumption for the generator is 4.51 gallons per hour.

In addition, fuel is needed for vehicles. Fuel and typical Class III package items are listed in Table 4-1.

Table 4-1. Fuel and Class III Packaged Items

GAA	Diesel Fuel (DS2 or JP8)	Denatured Alcohol
Hydraulic Fluid	OE/HD30	Dry Cleaning Solvent
OE/HD10	DEXRON 4-3	Freon for Environmental
GO 80/90	Deicing Fluid	Control Units
Brake Fluid	Oil, Lubricating Preservative	
Antifreeze	Windshield Washer Fluid	
Dry Nitrogen (99.5-percent pure - required for purging low noise amplifier)		

- Class IV (construction and barrier material) may be required from the supported headquarters/gaining command. Class IV requirements are dependent upon the location of the JTAGS. The amount of concertina wire required is determined by siting conditions.

- Class V (ammunition): The JTAGS detachment/section has 33/15 M9 pistols, respectively. The JTAGS unit requires Class V resupply after depletion of its basic load.

- Class VI (personal demand items): JTAGS personnel deploy with sufficient Class VI items to support themselves for 30 days. After 30 days, Class VI resupply through health and comfort packs and/or Army and Air Force exchange system (AAFES) or commercial facilities are required.

- Class VII (major end items): Each JTAGS section deploys with all assigned Class VII. In the aftermath of catastrophic damage, USCINCSPACE will designate a replacement JTAGS system. Any equipment that is not JTAGS-specific will be replaced through normal logistic procedures.

- Class VIII (medical): JTAGS personnel deploy with their individual first-aid kits and vehicle-aid kits. Class VIII replenishment is required as items are depleted. Replenishment items are obtained from the supporting command.

- Class IX (repair parts): JTAGS deploys with all assigned standard item and JTAGS peculiar PLL. Class IX resupply is required as PLL stocks or other Class IX stocks are depleted and are obtained from the supporting command.

- Class X (materials for other than military operations): Not applicable.

4-11. Standard item supply support for all classes of supply (i.e., from the DOD supply system) during peacetime is IAW established memorandums of understanding (MOUs) and inter-service agreements (ISAs). During

contingency operations, a JTAGS unit will receive organizational supply support for all classes of supply from the command it supports. The JTAGS equipment records and parts sergeant will determine what supplies are needed from the DOD supply system or from local purchase and request those supplies from the supported unit. This supply section will provide these items from their on-hand stocks or requisition the necessary items for the JTAGS through the designated supply support activity (SSA). Requisition procedures are detailed in Figure 4-2. The equipment records and parts sergeant will follow up requisitions IAW procedures outlined in Figure 4-3.
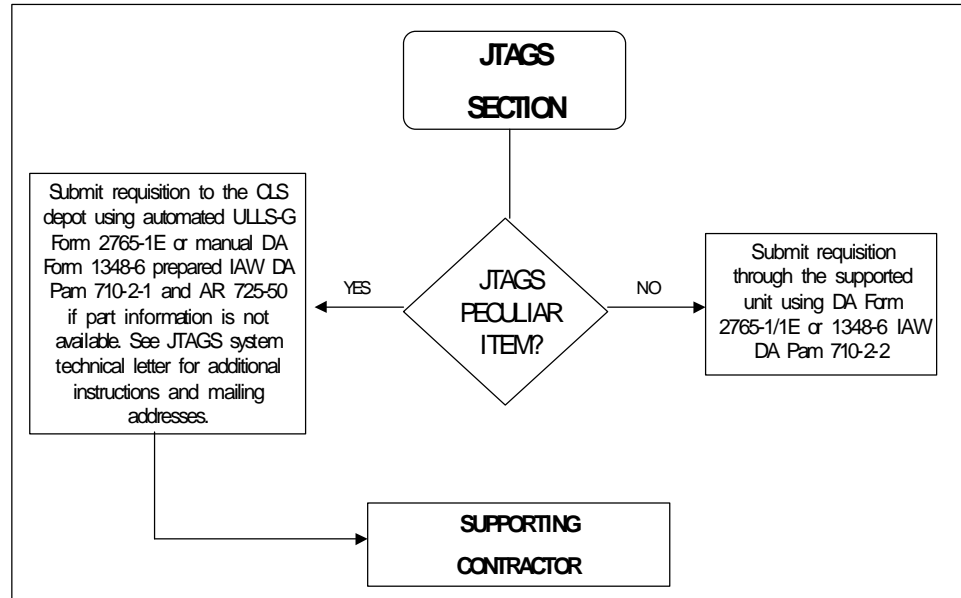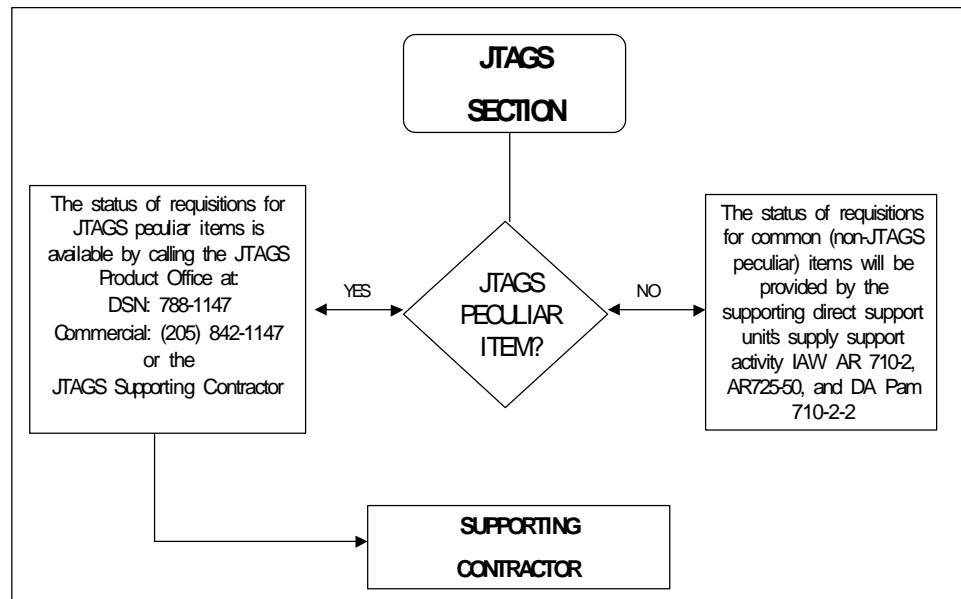

Figure 4-2. Requisition Flow

Figure 4-3. JTAGS Requisition Status Flow

FIXING

4-12. Fixing includes all actions necessary for retaining or restoring an item to a specified condition. It includes inspecting, testing, servicing, classifying as to serviceability, repairing, and rebuilding. Equipment maintenance support that includes equipment maintenance, repair, and calibration is required in support of the JTAGS section or detachment. Appropriate support is required from the theater communications security (COMSEC) account.

4-13. The maintenance mode of operations includes both scheduled and unscheduled maintenance. When unscheduled maintenance is required because of a fault, the operator uses diagnostic procedures and the JTAGS built-in test/built-in-test equipment (BIT/BITE) capability to isolate the faults to the line replacement unit (LRU). Scheduled maintenance is performed according to the procedures in the Operation and Maintenance Technical Manual (TM 9-5895-616-12&P-1, P-2).

4-14. During peacetime operations, a JTAGS section requires maintenance and training time that is coordinated through ARSPACE, USSPACECOM, and approved by the theater in which it is deployed. During this period of time, other TES elements assume responsibility for providing coverage.

4-15. The integration of BIT and manual test capability and the degree of test automation incorporated are such that JTAGS meets the availability and mission reliability requirements using only the operator personnel authorized in the JTAGS table of organization and equipment (TOE). On-site maintenance consists of fault isolation, replacement of LRUs, replacement of selected LRU components and subassemblies, verification testing, installation of equipment modifications, calibration certification of mobile/fixed test equipment, and preventive maintenance.

4-16. In a wartime scenario, if only one JTAGS section is providing theater coverage, the ALERT system will provide backup coverage during maintenance and training periods. If two JTAGS sections are in theater, one section will be designated as primary and the other as secondary and a handoff will occur between the sections. In the event that both systems are unable to provide coverage, the ALERT system will provide coverage.

4-17. Maintenance and training periods are scheduled by the detachment commander and NCOIC in accordance with guidance set forth in approved Army Space Command maintenance standard operating procedures.

4-18. Maintenance request procedures for sustainment of JTAGS elements during operational deployments is IAW the detachment maintenance checklist, which addresses both Army standard equipment and JTAGS peculiar equipment.

4-19. Army standard equipment in the JTAGS section or detachment is maintained through the organizational support element of the supported unit and through the DSU and other support units and assets in the JTAGS area of operation. An advance party of HQ USARSPACE and JTAGS detachment/section personnel will coordinate support, establish maintenance

accounts, and conduct other preliminary coordination prior to the main element's arrival. In accordance with the JTAGS deployment plan, the JTAGS element should have in their possession on arrival an ULLS-G generated diskette with the JTAGS equipment information. This disk is to be provided to the supporting DSU on arrival. In locations where ULLS-G is not used, the JTAGS personnel will conform to local maintenance SOPs.

4-20. Depot maintenance operations support both the combat forces and the Army supply system. DSU maintenance operations will repair all non-peculiar (i.e., standard) JTAGS equipment faults at and above organizational level. Equipment will be evacuated to higher echelons for maintenance as required in accordance with support agreements.

4-21. Standard item maintenance support during peacetime is IAW established MOUs and ISAs. During contingency operations, JTAGS will receive organizational maintenance support from the unit to which they are attached for support.

4-22. JTAGS operators perform preventive maintenance checks and services (PMCS) on Army standard equipment and report any faults to the organizational maintenance section of the supporting HQ. This maintenance section troubleshoots the equipment to determine cause of the fault and initiates corrective action appropriate to their level of maintenance. Repairs to equipment that are beyond its maintenance authorization (i.e., direct support (DS) or general support (GS) level) will be coordinated with the DSU. Equipment will either be turned in to the DSU maintenance facility, or DSU contact team support will be arranged (see Figures 4-5 and 4-6). PLL replenishment/repair parts are ordered through normal DSU Class IX supply activity (Figures 4-2 and 4-3).

4-23. The maintenance concept of operations employed by JTAGS for JTAGS peculiar items has two levels: unit and depot (CLS). JTAGS unit personnel have the capability to fault isolate to the LRU using BIT/BITE or test, measurement, and diagnostic equipment (TMDE) procedures. The operator repairs the system by replacement of faulty LRUs. Unserviceable LRUs are evacuated to the contractor for repair. GFE is maintained by the designated theater supporting units IAW provisions of existing ISAs and MOUs. Organizational level requirements are summarized in Figure 4-4.

4-24. The JTAGS element has organic personnel capable of performing operator and unit level maintenance on JTAGS peculiar equipment. Higher echelon maintenance is provided via contractor support and is coordinated through the JTAGS element. Contractor maintenance support will deploy to JTAGS locations worldwide to conduct repairs of JTAGS peculiar equipment.

4-25. Equipment operators/maintainers use PMCS to detect early signs of equipment failure (or potential failure) and ensure that faults are corrected before more costly and time-consuming repairs are required. Unserviceable JTAGS peculiar repairable items (properly preserved, protected, and tagged) that are beyond authorized capability or capacity to repair are evacuated to the contractor.
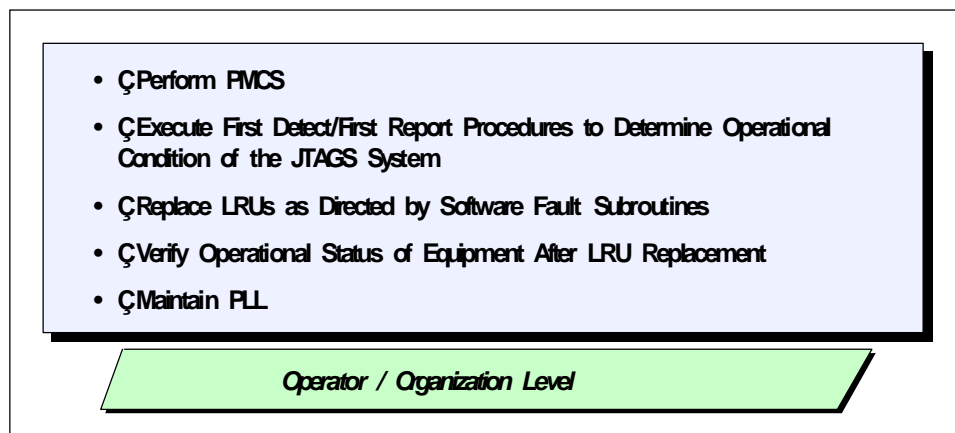
- ÇPerform PMCS
- ÇExecute First Detect/First Report Procedures to Determine Operational Condition of the JTAGS System
- ÇReplace LRUs as Directed by Software Fault Subroutines
- ÇVerify Operational Status of Equipment After LRU Replacement
- ÇMaintain PLL

Operator / Organization Level

Figure 4-4. JTAGS Operator/Maintainer Support

4-26. The turn-in of unserviceable equipment will be IAW procedures outlined in Figure 4-5.

JTAGS SECTION

Unserviceable JTAGS peculiar repairable items will be turned in to the CLS depot by registered mail, using the shipping container that contained the replacement unit. The JTAGS unit will package and ship the unserviceable JTAGS peculiar item to the depot IAW the instructions provided in the JTAGS system technical letter.

YES — **JTAGS PECULIAR ITEM?** — NO

Common non-JTAGS peculiar items will be turned in to the supporting DSUs supply support activity IAW AR 701-2, AR 725-50, and DA Pam 710-2-2.
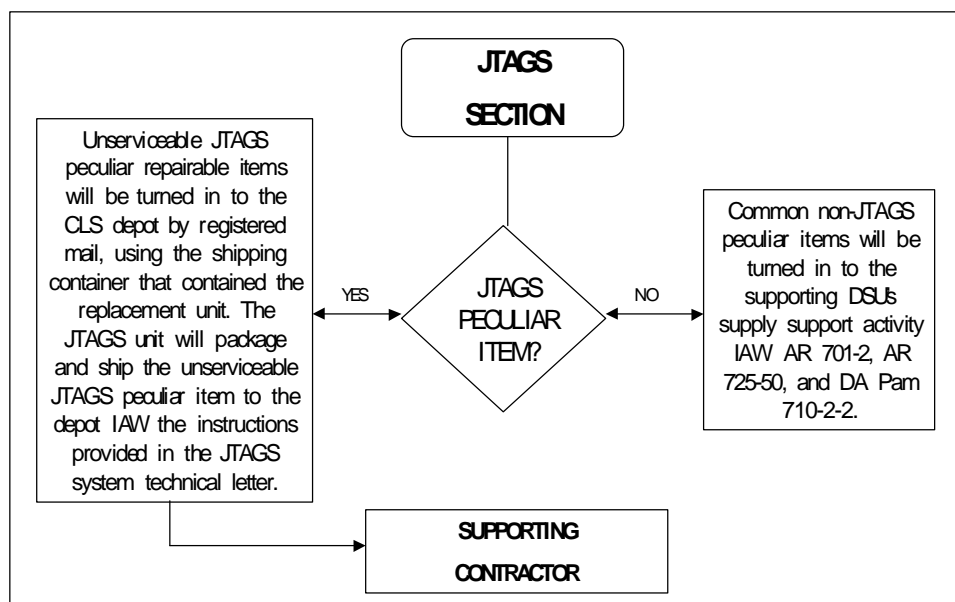
SUPPORTING CONTRACTOR

Figure 4-5. Unserviceable Turn-In Procedures

4-27. Prior to deployment, the JTAGS element must obtain pager codes from the supporting contractor, to facilitate maintenance support while deployed. Contractors are required by a conflict clause in their contracts to support JTAGS in wartime operations.

4-28. For support prior to the breakout of hostilities, the JTAGS element will contact the supporting contractor for replacement parts using the pager codes.   The supporting contractor will forward replacement parts via government bill of lading (GBL). If GBL is not available, commercial carrier or courier is used. The JTAGS element will ship inoperable parts to the

supporting contractor by using the packing materials in which the replacement parts were shipped.

4-29.   In a pre-hostility environment, the JTAGS element contacts the supporting contractor for a replacement part as described in paragraph 4-28. The advance party or detachment commander will determine procedures once established in theater. In all instances, demand history will be maintained.

4-30. If contact team support is required, the JTAGS element contacts the supporting contractor for assistance. The JTAGS Product Office authorizes depot personnel to provide on-site assistance. Details for contacting the depot for contact team support is outlined in Figure 4-6.
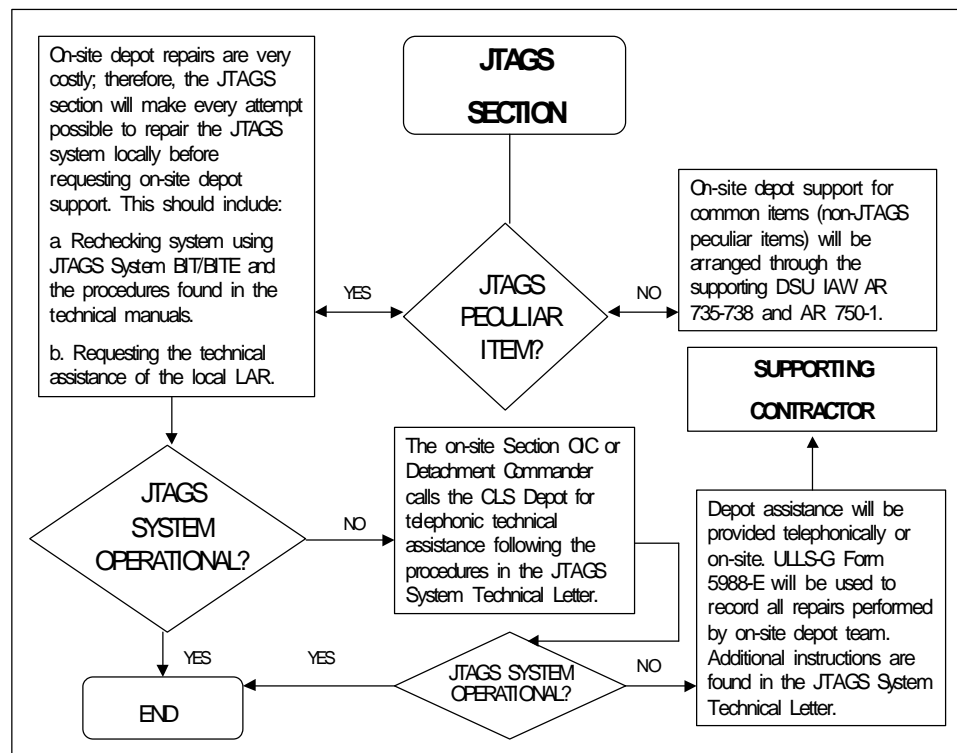

Figure 4-6. On-Site JTAGS Depot Repairs

4-31. Software support is obtained from the supporting contractor's 24-hour telephone technical support. If corrections cannot be made telephonically, the supporting contractor's engineers are required to be deployed within 72 hours for on-site assistance.

4-32. Personnel authorized to make calls and request maintenance and software support for JTAGS equipment are:

- JTAGS Detachment Commander.
- JTAGS Section Warrant Officer.
- JTAGS Detachment NCOIC.

- JTAGS Section NCOIC.

Other individuals (i.e., the equipment records and parts sergeant) may be authorized to request maintenance support at the discretion of the detachment commander based on operational necessity.

MOVING

4-33. JTAGS is capable of tactical movement within theater using organic assets. See Chapter 3, Sections VIII and IX for a complete description of strategic, operational, and tactical movement requirements and capabilities.

4-34. The majority of JTAGS nontactical and administrative transportation requirements are fulfilled using organic assets. Any additional requirements resulting from specific theater considerations must be identified and support negotiated with the host-supporting units through HQ USARSPACE.

MANNING, COMBAT HEALTH SUPPORT, AND FIELD SERVICES SUPPORT

4-35. Support services for JTAGS detachments during peacetime are provided through support agreements with the supported unit. Agreements are established between USARSPACE (FWD) and the supporting units in theater. Modifications to support agreements are made to facilitate mission requirements. Theater support operations include personnel services, combat health support, and field services. Planning for personnel services support must include services for naval personnel who deploy as part of the detachment. Peacetime support coordinated and provided through the use of MOAs must transition to wartime support as directed in the OPLAN/operations order (OPORD) for the area of operation. The detachment commander and NCOIC are responsible for ensuring that the required coordination with the supported command is accomplished.

4-36. Personnel service support includes social actions, administrative services, military and civilian personnel support, religious support, combat health support, housing and lodging, training, finance, public affairs, legal services, education, and postal services.

4-37. Combat health support includes medical treatment and hospitalization, in-theater medical evacuation, medical regulating, dental services, veterinary services, preventive medicine, and medical consultation.

4-38. Field service support includes laundry, bath, clothing exchange, textile renovation, salvage, decontamination, mortuary affairs, clothing renovation, and post exchange sales.

RECONSTITUTION

4-39. Reconstitution consists of nonroutine actions taken to restore damaged units to a specific level of combat readiness. The nonroutine actions are based on priorities established by the unit commander and result in the

receipt of specified available resources to accomplish the reconstitution mission.

4-40. The JTAGS and supported unit commanders have two reconstitution options available to return the JTAGS to a specified level of combat capability. Those two options are reorganization and regeneration. The commander can execute them separately, but most often will execute them in combination, depending on current and anticipated situations, command priorities, resources, and time available.

4-41. Reorganization is accomplished within the unit. Reorganization consists of cross-leveling of assets from the detachment or section to form composite teams, sections, or a detachment. Since reorganization is conducted internally, it is the most expedient means of maintaining JTAGS mission capability in the early stages of a conflict and in forward areas throughout the duration of the conflict. It is the option most often executed by commanders.

4-42. Regeneration requires outside support. Regeneration consists of rebuilding a unit by infusing new personnel, equipment, and supplies into a unit and then conducting the necessary training to develop combat effectiveness. Regeneration is the more difficult of the two available reconstitution options. It requires a great deal of outside assistance and a great deal of time for training. Because of the low density of this system, the only resources available for regeneration will be the CONUS-based JTAGS sections. See Class VII discussion in paragraph 4-10.

4-43. The JTAGS detachment commander and key personnel determine the losses in soldiers and equipment. The commander assesses the capability of the unit to function, and the unit forwards the information to the supported commander and USARSPACE.

4-44. The battle damage assessment includes:

- Decontamination needs beyond the capability of the unit.
- Command and control capability within the unit.
- Key personnel and crew capability.
- Status of equipment (standard and JTAGS peculiar).
- Supply status of the detachment or section (standard and JTAGS peculiar).
- Training status in light of casualties incurred.

4-45. The success of the reconstitution effort depends on effective prior coordination between the supported unit staff, JTAGS detachment commander, USARSPACE staff, and theater planners.

4-46. USARSPACE HQ will monitor and provide the following essential information to the JTAGS detachment commander and the supported commander's staff:

- New replacements (personnel and equipment).

- Equipment returned from maintenance.

- Personnel returned to duty status.

- Imbalances of personnel and equipment in subordinate units.

- Status of intransit equipment and personnel.

4-47. Logistic linkup points will be designated for incoming replacement equipment and personnel. Standard equipment will flow through DSU support channels to the linkup point. JTAGS peculiar equipment will flow through the CLS channels to the linkup point. On-site contractor support personnel will assist with the reconstitution effort. Replacement personnel flow through the G1 replacement regulating detachment. Preplanned reinforcements of equipment and personnel may be programmed into the TPFDL. Preplanned CLS equipment and software may be programmed to support contingencies.

4-48. The coordination between the JTAGS chain of command and the supported command is critical. Standardized procedures during exercise should be emphasized. Staff training for reconstitution is usually a low priority; but in reality, reconstitution is a necessary component of sustainment in a wartime environment. The criteria and layout of reconstitution should be addressed in detail in OPLANs because of the low density and unique equipment supported in JTAGS.

SECURITY

4-49. JTAGS security considerations are discussed in paragraph 3-58.

ENGINEERING AND FACILITIES

4-50. Facilities support includes custodial services, entomology services, environmental cleanup and compliance, fire protection, facilities and real property support, utilities, and facility maintenance and repair.

4-51. JTAGS is designed to operate using commercial 60-Hz power as its primary power source. Specific power requirements are identified in Appendix B, Section III. The JTAGS additional authorized list (AAL) provides an authorization for a motor generator-converter, 31.25 kVA, model MCP 31K6633. In a tactical situation when commercial power may not be available, JTAGS is switched to a 60-kW TQG set as the primary power source. Generator support (i.e., maintenance, fuel, supplies, etc.) is arranged through the existing support structure.

4-52. If a sustained operational contingency is planned, steps should be taken by the gaining command to provide facilities to accommodate the detachment headquarters element, shift personnel, and section organic equipment.

4-53. Personnel needs (i.e., dining facilities, living quarters, religious support, and administrative support) are provided by the gaining command.

EXTERNAL COMMUNICATIONS SUPPORT

4-54. JTAGS external communications support and connectivity requirements are described in detail in Chapter 3, Sections X, XI, and XII and include DSN and/or commercial phonelines that are required to support both operational and administrative voice communications.